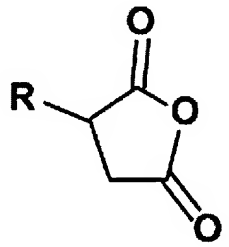
IN THE CLAIMS:

1. (ORIGINAL) A multi-functional composition for use as an additive for fuels and lubricants comprising an amination product of a hydrocarbyl substituted succinic acylating agent and a mixture comprising an aliphatic polyamine and an aromatic polyamine, wherein the molar ratio of aliphatic polyamine to aromatic polyamine in the mixture ranges from about 10:0.1 to about 0.1:10, and wherein the amination product contains at least about 0.1 molar equivalent of the polyamine mixture to 1 molar equivalent of the hydrocarbyl substituted succinic acylating agent.

2. (CURRENTLY AMENDED) The composition of claim 1, wherein the aliphatic polyamine comprises a substantially linear aliphatic ~~amine~~polyamine.

3. (ORIGINAL) The composition of claim 1, wherein the hydrocarbyl substituted succinic acylating agent comprises a compound of the structure:



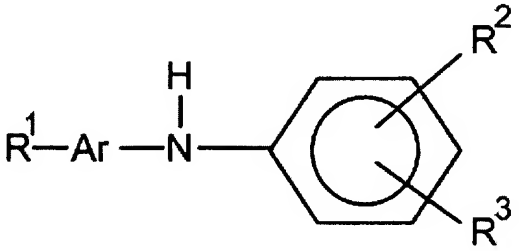
wherein R comprises a hydrocarbyl group having a number average molecular weight as determined by gel permeation chromatography ranging from about 200 to about 10,000.

4. (ORIGINAL) The composition of claim 3, wherein R comprises polyisobutylene (PIB).

5. (ORIGINAL) The composition of claim 1, wherein a molar ratio of acylating agent to amino groups in the mixture ranges from about 1:1 to about 6:1.

6. (CURRENTLY AMENDED) The composition of claim 1, wherein the aromatic polyamine comprises a compound selected from the group consisting of N-

phenyl-phenylenediamine, N-naphthyl-phenylene diamine, and substituted aromatic polyamines of the structure:



wherein Ar is an aromatic group, R^1 is selected from the group consisting of ~~H,~~ —NH_2, —NH-aryl-NH_2, —NH-aryl-alkyl-NH_2, —NH-alkyl-NH_2, ~~—NH-aryl, —NH-aryl-alkyl, —NH-alkyl, or a branched or straight chain radical having 4 to 24 carbon atoms that can be alkyl, alkenyl, alkoxy, arylalkyl, hydroxyalkyl, and~~ or aminoalkyl wherein alkyl is a branched or straight chain radical having 4 to 24 carbon atoms, and R^2 is selected from the group consisting of —NH_2, —$NH(CH_2)_n)_mNH_2$, —CH_2-$(CH_2)_n$-NH_2, and —aryl-NH_2, in which *n* and *m* have a value of from 1 to 10, and R^3 is selected from the group consisting of —H, alkyl, alkenyl, alkoxy, arylalkyl, and alkaryl having 4 to 24 carbon atoms and with the proviso that only one of R^2 and R^3 has a terminal NH_2 group.

7. (ORIGINAL) A lubricant composition comprising an oil of lubricating viscosity and from about 0.1 to 10 wt. %, based on the total weight of the lubricant composition, of the amination product of claim 1.

8. (ORIGINAL) A vehicle having moving parts and containing a lubricant for lubricating the moving parts, the lubricant comprising an oil of lubricating viscosity and from about 0.1 to 10 wt. %, based on the total weight of the lubricant composition, of the amination product of claim 1.

9. (ORIGINAL) A method for making a novel amination product for use as an additive for fuels and lubricants, the amination product having combined dispersant and antioxidant functionality, the method comprising the steps of:

providing a hydrocarbyl substituted succinic acylating agent to a reaction vessel;

heating the acylating agent to an elevated temperature above room temperature;

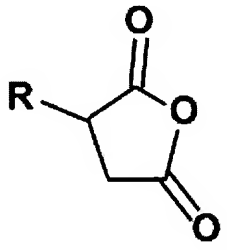
contacting an aromatic polyamine with an aliphatic polyamine to provide a polyamine mixture, wherein the molar ratio of aliphatic polyamine to aromatic polyamine in the mixture ranges from about 10:0.1 to about 0.1:10; and

reacting the amine mixture with the heated acylating agent under an inert atmosphere to provide the novel amination product, wherein the amination product contains at least about 0.1 molar equivalent of the polyamine mixture to 1 molar equivalent of the hydrocarbyl substituted succinic acylating agent.

10. (ORIGINAL) The method of claim 9, wherein the polyamine mixture and acylating agent are reacted in the substantial absence of a surfactant.

11. (CURRENTLY AMENDED) The method of claim 9, wherein the aliphatic polyamine comprises a substantially linear aliphatic ~~amine~~ polyamine.

12. (ORIGINAL) The method of claim 9, wherein the hydrocarbyl substituted succinic acylating agent comprises a compound of the structure:

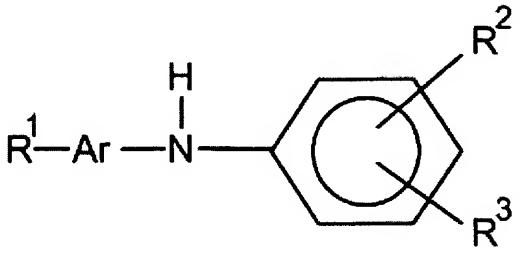


wherein R comprises a hydrocarbyl group having a number average molecular weight as determined by gel permeation chromatography ranging from about 200 to about 10,000.

13. (ORIGINAL) The method of claim 12, wherein R comprises polyisobutylene (PIB).

14. (ORIGINAL) The method of claim 9, wherein a molar ratio of acylating agent to amino groups in the mixture ranges from about 1:1 to about 6:1.

15. (CURRENTLY AMENDED) The method of claim 9, wherein the aromatic polyamine comprises a compound selected from the group consisting of N-phenyl-phenylenediamine, N-naphthyl-phenylene diamine, and substituted aromatic polyamines of the structure:



wherein Ar is an aromatic group, R^1 is selected from the group consisting of ~~H,~~ —NH_2, —NH-aryl-NH_2, —NH-aryl-alkyl-NH_2, —NH-alkyl-NH_2, ~~—NH-aryl, —NH-aryl-alkyl, —NH-alkyl, or a branched or straight chain radical having 4 to 24 carbon atoms that can be alkyl, alkenyl, alkoxy, arylalkyl, hydroxyalkyl, and~~ or aminoalkyl wherein alkyl is a branched or straight chain radical having 4 to 24 carbon atoms, and R^2 is selected from the group consisting of —NH_2, —$NH(CH_2)_n)_mNH_2$, —CH_2-$(CH_2)_n$-NH_2, and —aryl-NH_2, in which *n* and *m* have a value of from 1 to 10, and R^3 is selected from the group consisting of —H, alkyl, alkenyl, alkoxy, arylalkyl, and alkaryl having 4 to 24 carbon atoms and with the proviso that only one of R^2 and R^3 has a terminal NH_2 group.

16. (ORIGINAL) A multifunctional composition for use as an additive for fuels and lubricants comprising an amination product made by the method of claim 9.

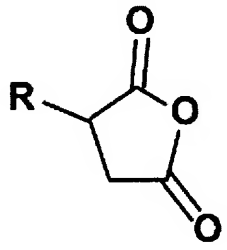
17. (ORIGINAL) A lubricant composition comprising an oil of lubricating viscosity and from about 0.1 to 10 wt.%, based on the total weight of the lubricant composition, of the multifunctional composition of claim 16.

18. (ORIGINAL) A fuel composition comprising a hydrocarbyl fuel and from about 0.1 to about 15.0 weight percent based on the total weight of the fuel composition, of the multifunctional composition of claim 16.

19. (ORIGINAL) A lubricant additive comprising an amination product of a hydrocarbyl substituted succinic acylating agent and a mixture comprising at least one aliphatic polyamine and at least one aromatic polyamine, wherein the molar ratio of aliphatic polyamine to aromatic polyamine in the mixture ranges from about 10:0.1 to about 0.1:10, and wherein the amination product contains at least about 0.1 molar equivalent of the aromatic polyamine to 1 molar equivalent of the hydrocarbyl substituted succinic acylating agent.

20. (ORIGINAL) The lubricant additive of claim 19, wherein the aliphatic polyamine comprises a substantially linear aliphatic amine.

21. (ORIGINAL) The lubricant additive of claim 19, wherein the hydrocarbyl substituted succinic acylating agent comprises a compound of the structure:

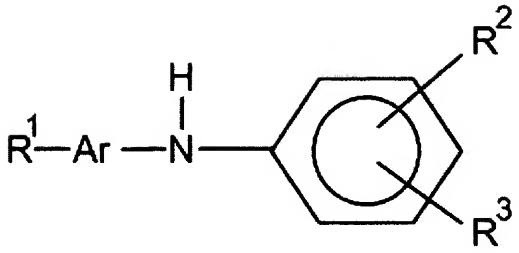


wherein R comprises a hydrocarbyl group having a number average molecular weight as determined by gel permeation chromatography ranging from about 200 to about 10,000.

22. (ORIGINAL) The lubricant additive of claim 21, wherein R comprises polyisobutylene (PIB).

23. (ORIGINAL) The lubricant additive of claim 19, wherein a molar ratio of acylating agent to amino groups in the mixture ranges from about 1:1 to about 6:1.

24. (CURRENTLY AMENDED) The lubricant additive of claim 19, wherein the aromatic polyamine comprises a compound selected from the group consisting of N-phenyl-phenylenediamine, N-naphthyl-phenylene diamine, and substituted aromatic polyamines of the structure:



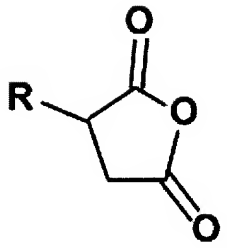
wherein Ar is an aromatic group, R^1 is selected from the group consisting of ~~H,~~ —NH_2, —NH-aryl-NH_2, —NH-aryl-alkyl-NH_2, —NH-alkyl-NH_2, ~~—NH-aryl, —NH-aryl-alkyl, —NH-alkyl, or a branched or straight chain radical having 4 to 24 carbon atoms that can be alkyl, alkenyl, alkoxy, arylalkyl, hydroxyalkyl, and~~ or aminoalkyl wherein alkyl is a branched or straight chain radical having 4 to 24 carbon atoms, and R^2 is selected from the group consisting of —NH_2, —$NH(CH_2)_n)_mNH_2$, —CH_2-$(CH_2)_n$-NH_2, and —aryl-NH_2, in which *n* and *m* have a value of from 1 to 10, and R^3 is selected from the group consisting of —H, alkyl, alkenyl, alkoxy, arylalkyl, and alkaryl having 4 to 24 carbon atoms and with the proviso that only one of R^2 and R^3 has a terminal NH_2 group.

25. (ORIGINAL) A lubricant composition comprising an oil of lubricating viscosity and from about 0.1 to 10 wt.%, based on the total weight of the lubricant composition, of the lubricant additive of claim 19.

26. (ORIGINAL) A fuel additive comprising an amination product of a hydrocarbyl substituted succinic acylating agent and a mixture containing an aliphatic polyamine and an aromatic polyamine, wherein the molar ratio of aliphatic polyamine to aromatic polyamine in the mixture ranges from about 10:0.1 to about 0.1:10 and wherein the amination product contains at least about 0.1 molar equivalent of the polyamine mixture to 1 molar equivalent of the hydrocarbyl substituted succinic acylating agent.

27. (ORIGINAL) The fuel additive of claim 26, wherein the aliphatic polyamine comprises a substantially linear aliphatic amine.

28. (ORIGINAL) The fuel additive of claim 26, wherein the hydrocarbyl substituted succinic acylating agent comprises a compound of the structure:

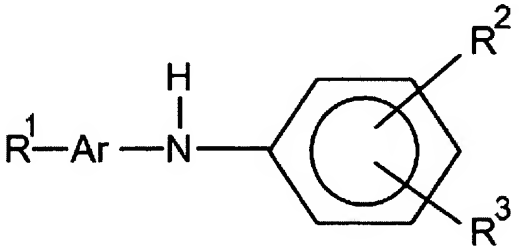


wherein R comprises a hydrocarbyl group having a number average molecular weight as determined by gel permeation chromatography ranging from about 200 to about 10,000.

29. (ORIGINAL) The fuel additive of claim 28, wherein R comprises polyisobutylene (PIB).

30. (ORIGINAL) The fuel additive of claim 26, wherein a molar ratio of acylating agent to amino groups in the mixture ranges from about 1:1 to about 6:1.

31. (CURRENTLY AMENDED) The fuel additive of claim 26, wherein the aromatic polyamine comprises a compound selected from the group consisting of N-phenyl-phenylenediamine, N-naphthyl-phenylene diamine, and substituted aromatic polyamines of the structure:



wherein Ar is an aromatic group, R^1 is selected from the group consisting of ~~H,~~ —NH_2, —NH-aryl-NH_2, —NH-aryl-alkyl-NH_2, —NH-alkyl-NH_2, ~~—NH-aryl, —NH-aryl-alkyl, —NH-alkyl, or a branched or straight chain radical having 4 to 24 carbon atoms that can be alkyl, alkenyl, alkoxy, arylalkyl, hydroxyalkyl, and~~ or aminoalkyl wherein alkyl is a branched or straight chain radical having 4 to 24 carbon atoms, and R^2 is selected from the group consisting of —NH_2, —$NH(CH_2)_n)_mNH_2$, —CH_2-$(CH_2)_n$-NH_2, and —aryl-NH_2, in which *n* and *m* have a value of from 1 to 10, and R^3 is selected from the group

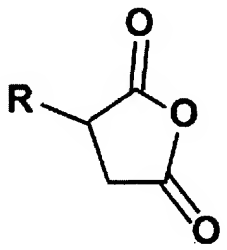
consisting of —H, alkyl, alkenyl, alkoxy, arylalkyl, and alkaryl having 4 to 24 carbon atoms and with the proviso that only one of R^2 and R^3 has a terminal NH_2 group.

32. (ORIGINAL) A fuel composition comprising a fuel and from about 0.1 to 15 wt. %, based on the total weight of the fuel composition, of the fuel additive of claim 26.

33. (ORIGINAL) A method of lubricating moving parts of a vehicle, the method comprising using as a lubricating oil for one or more moving parts of the vehicle a lubricant composition containing a lubricant and a lubricant additive, the lubricant additive including an amination product of a hydrocarbyl substituted succinic acylating agent and a mixture containing an aliphatic polyamine and an aromatic polyamine, wherein the molar ratio of aliphatic polyamine to aromatic polyamine in the mixture ranges from about 10:0.1 to about 0.1:10, and wherein the amination product contains at least about 0.1 molar equivalent of the polyamine mixture to 1 molar equivalent of the hydrocarbyl substituted succinic acylating agent.

34. (ORIGINAL) The method of claim 33, wherein the aliphatic polyamine comprises a substantially linear aliphatic amine.

35. (ORIGINAL) The method of claim 33, wherein the hydrocarbyl substituted succinic acylating agent comprises a compound of the structure:

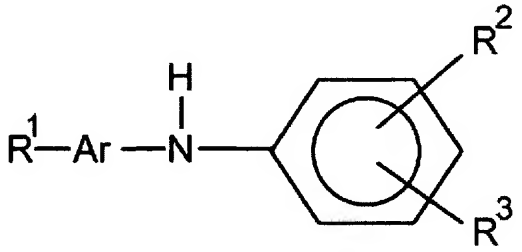


wherein R comprises a hydrocarbyl group having a number average molecular weight as determined by gel permeation chromatography ranging from about 200 to about 10,000.

36. (ORIGINAL) The method of claim 35, wherein R comprises polyisobutylene (PIB).

37. (ORIGINAL) The method of claim 33, wherein a molar ratio of acylating agent to amino groups in the mixture ranges from about 1:1 to about 6:1.

38. (CURRENTLY AMENDED) The method of claim 33, wherein the aromatic polyamine comprises a compound selected from the group consisting of N-phenyl-phenylenediamine, N-naphthyl-phenylene diamine, and substituted aromatic polyamines of the structure:



wherein Ar is an aromatic group, R^1 is selected from the group consisting of ~~H,~~ —NH_2, —NH-aryl-NH_2, —NH-aryl-alkyl-NH_2, —NH-alkyl-NH_2, ~~—NH-aryl, —NH-aryl-alkyl, —NH-alkyl, or a branched or straight chain radical having 4 to 24 carbon atoms that can be alkyl, alkenyl, alkoxy, arylalkyl, hydroxyalkyl, and~~ or aminoalkyl wherein alkyl is a branched or straight chain radical having 4 to 24 carbon atoms, and R^2 is selected from the group consisting of —NH_2, —$NH(CH_2)_n)_mNH_2$, —CH_2-$(CH_2)_n$-NH_2, and —aryl-NH_2, in which *n* and *m* have a value of from 1 to 10, and R^3 is selected from the group consisting of —H, alkyl, alkenyl, alkoxy, arylalkyl, and alkaryl having 4 to 24 carbon atoms and with the proviso that only one of R^2 and R^3 has a terminal NH_2 group.

39. (ORIGINAL) The method of claim 33 wherein the vehicle includes an internal combustion engine having a crankcase and wherein the lubricant composition comprises a crankcase oil present in the crankcase of the vehicle.

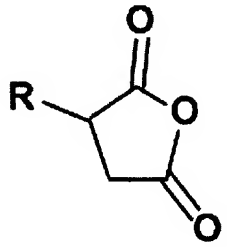
40. (ORIGINAL) The method of claim 33 wherein the lubricant composition comprises a drive train lubricant present in an automotive drive train of the vehicle.

41. (ORIGINAL) A method for lubricating moving parts comprising contacting the moving parts with a lubricant composition containing a lubricant and a lubricant additive, the lubricant additive comprising an amination product of a hydrocarbyl substituted succinic acylating agent and a mixture containing an aliphatic polyamine and an aromatic polyamine, wherein the molar ratio of aliphatic polyamine to aromatic polyamine in the mixture ranges from about 10:0.1 to about 0.1:10, and wherein the amination product contains at least about 0.1 molar equivalent of the polyamine mixture to 1 molar equivalent of the hydrocarbyl substituted succinic acylating agent.

42. (ORIGINAL) The method of claim 41 wherein the lubricant composition comprises a gear lubricant present in a gear box.

43. (ORIGINAL) The method of claim 41, wherein the aliphatic polyamine comprises a substantially linear aliphatic amine.

44. (ORIGINAL) The method of claim 41, wherein the hydrocarbyl substituted succinic acylating agent comprises a compound of the structure:

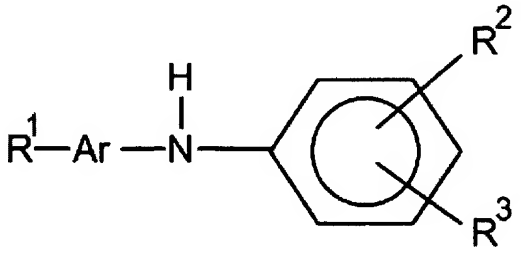


wherein R comprises a hydrocarbyl group having a number average molecular weight as determined by gel permeation chromatography ranging from about 200 to about 10,000.

45. (ORIGINAL) The method of claim 44, wherein R comprises polyisobutylene (PIB).

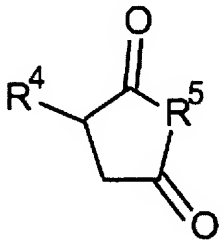
46. (ORIGINAL) The method of claim 41, wherein a molar ratio of acylating agent to amino groups in the mixture ranges from about 1:1 to about 6:1.

47. (CURRENTLY AMENDED) The method of claim 41, wherein the aromatic polyamine comprises a compound selected from the group consisting of N-phenyl-phenylenediamine, N-naphthyl-phenylene diamine, and substituted aromatic polyamines of the structure:

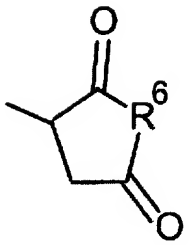


wherein Ar is an aromatic group, R^1 is selected from the group consisting of ~~H,~~ —NH_2, —NH-aryl-NH_2, —NH-aryl-alkyl-NH_2, —NH-alkyl-NH_2, ~~—NH-aryl, —NH-aryl-alkyl, —NH-alkyl, or a branched or straight chain radical having 4 to 24 carbon atoms that can be alkyl, alkenyl, alkoxy, arylalkyl, hydroxyalkyl, and~~ or aminoalkyl wherein alkyl is a branched or straight chain radical having 4 to 24 carbon atoms, and R^2 is selected from the group consisting of —NH_2, —$NH(CH_2)_n)_mNH_2$, —CH_2-$(CH_2)_n$-NH_2, and —aryl-NH_2, in which *n* and *m* have a value of from 1 to 10, and R^3 is selected from the group consisting of —H, alkyl, alkenyl, alkoxy, arylalkyl, and alkaryl having 4 to 24 carbon atoms and with the proviso that only one of R^2 and R^3 has a terminal NH_2 group.

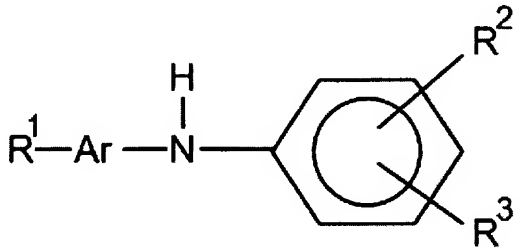
48. (ORIGINAL) An oil-soluble composition comprising a compound of the formula:



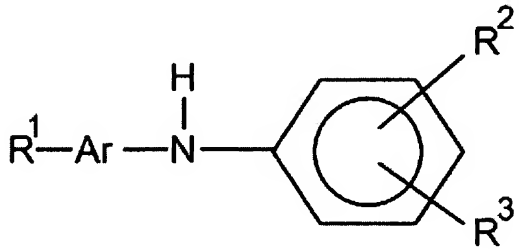
wherein R^4 is selected from the group consisting of linear and branched polyolefins and substituted olefins wherein the olefin-substituent has the structure:



wherein R^6 is selected from one or more linear or branched aliphatic polyamines, aromatic polyamino group derived from N-phenyl-1,4-phenylenediamine, N-phenyl-1,3-phenylenediamine, and N-phenyl-1,2-phenylenediamine, and mixtures thereof and substituted aromatic polyamines of the structure:

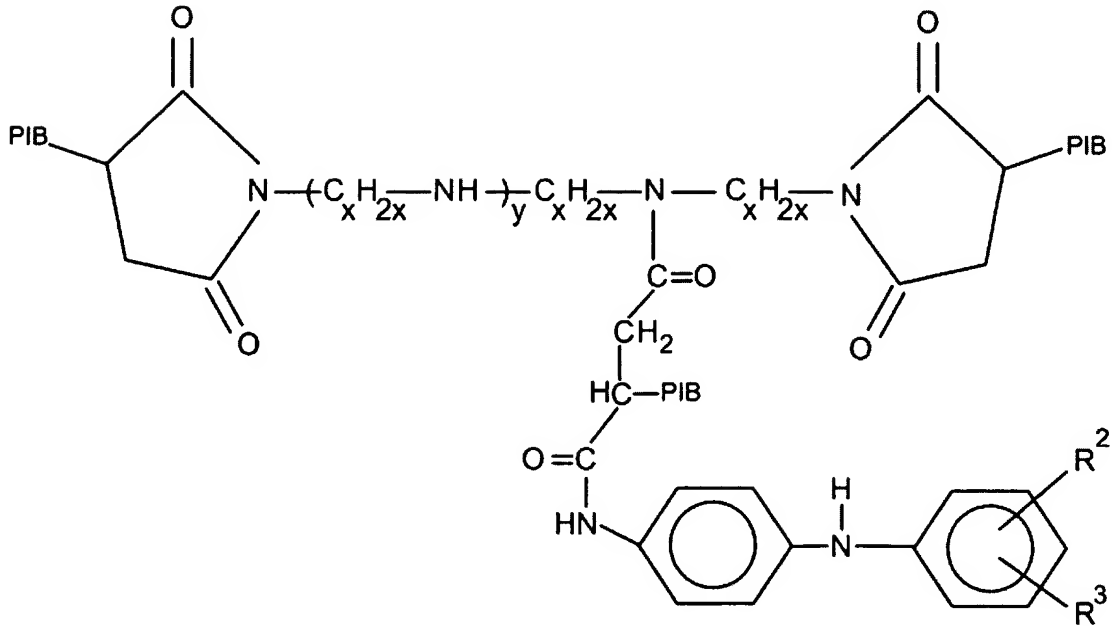


wherein R^1, R^2, and R^3 are defined above, and R^5 is selected from linear or branched aliphatic polyamines, aromatic polyamino group derived from N-phenyl-1,4-phenylenediamine, N-phenyl-1,3-phenylenediamine, and N-phenyl-1,2-phenylenediamine, and mixtures thereof and substituted aromatic polyamines of the structure:

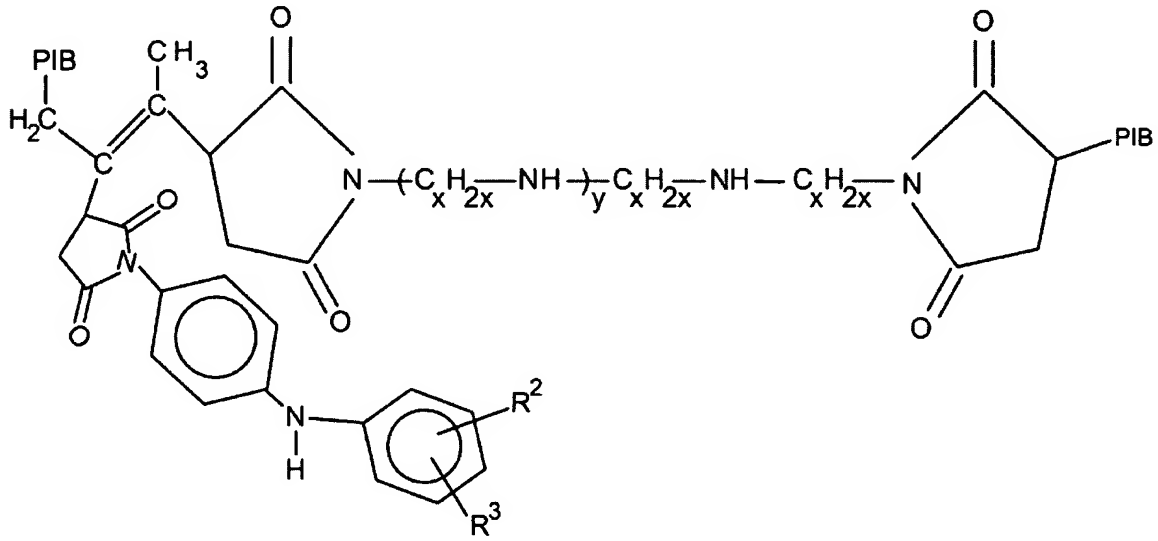


wherein R^1, R^2, and R^3 are defined above, and substituted linear or branched aliphatic polyamines, wherein the substituent is selected from H, a hydrocarbyl-substituted succinic anhydride group, an amido acid group, and a diamido group.

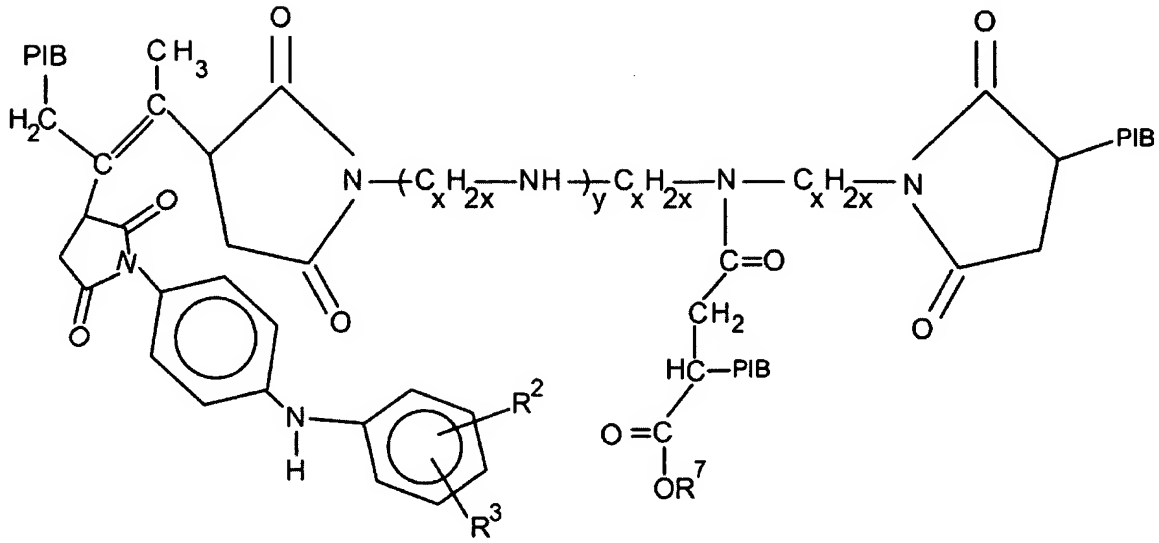
49. (ORIGINAL) The composition of claim 48, wherein the compound is selected from the group consisting of bis-succinimide-di-amide-amines of the structure:



wherein PIB is polyisobutylene, x is an integer from 1 to 6, y is an integer from 1 to 10, R^2 is selected from the group consisting of —NH_2, —$NH(CH_2)_n)_mNH_2$, —CH_2-$(CH_2)_n$-NH_2, and —aryl-NH_2, in which *n* and *m* have a value of from 1 to 10, and R^3 is selected from the group consisting of —H, alkyl, alkenyl, alkoxy, arylalkyl, and alkaryl having 4 to 24 carbon atoms and with the proviso that only one or R^2 and R^3 has a terminal NH_2 group; bis-succinimides containing an imide-amine substituted olefin of the structure:

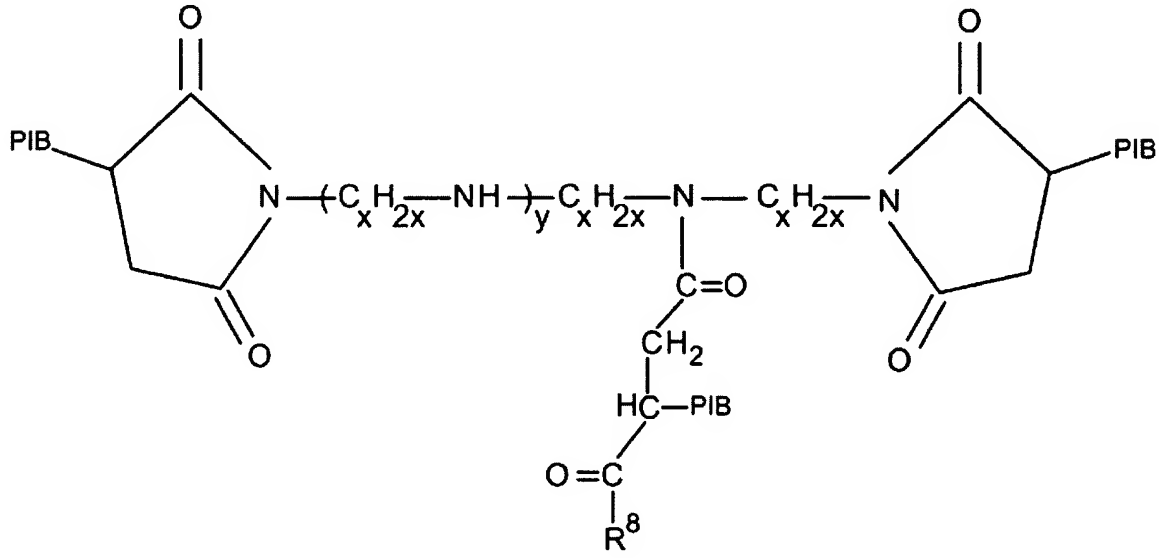


wherein PIB, x, y, R^2, and R^3 are as defined above and bis-succinimide-amides containing an imide-amine substituted olefin of the structure:



wherein PIB, x, y, R^2 and R^3 are as defined above, and R^7 is selected from the group consisting of H, amine salt, and a metal salt.

50. (CURRENTLY AMENDED) The composition of claim 48, wherein the compound comprises a bis-succinimide-amide containing an intramolecular-cyclized or intermolecular cross-linked amide-amine containing a structure represented by:



wherein R^8 is bonded to a secondary nitrogen atom in a polyamine of a ~~succinimide~~ bis-succinimide.

51. (ORIGINAL) A lubricant additive containing the composition of claim 49.

52. (ORIGINAL) A lubricant containing the lubricant additive of claim 50.

53. (ORIGINAL) A fuel additive containing the composition of claim 49.

54. (ORIGINAL) A fuel containing the fuel additive of claim 52.

55. (ORIGINAL) The composition of claim 4, wherein the polyisobutylene has a methyl vinylidene isomer content of at least about 70% methylvinylidene.

56. (ORIGINAL) A method of fueling a vehicle's engine comprising combusting in said engine a fuel comprising a minor amount of a fuel additive of claim 26.

57. (NEW) An amination product of a hydrocarbyl substituted succinic acylating agent and a mixture comprising at least one aliphatic polyamine and at least one aromatic polyamine, wherein the molar ratio of aliphatic polyamine to aromatic polyamine in the mixture ranges from 10:0.1 to 0.1:10, and wherein the amination product contains at least 0.1 molar equivalent of the aromatic polyamine to 1 molar equivalent of the hydrocarbyl substituted succinic acylating agent.